KM0532/KM0932/KM0032

32-Port 5/9-User Cat 5 Matrix KVM

ATEN Matrix KVM Switches are designed for modern data centers that require reliable, high security access and control of multiple servers. With non-blocked access and flexible expansion support, Matrix KVM switches offer high quality video sessions for secure, real-time control of your entire data center devices.

With automatic skew compensation and Auto Signal Compensation (ASC) techniques, Matrix KVM switches provide greatly enhanced video quality via Cat 5e/6 cabling – 1280x1024 @60Hz for up to 300 meters. The industry's first full screen Graphical User Interface offers a tree view list of installed devices – providing smooth navigation and convenient access and control – not only saving on training time and costs; but increasing user efficiency, as well.

The KM0932/KM0532 is the first Matrix KVM Switch to offer both audio and virtual media features. Being audio enabled, the sound output and beeps from the servers allow administrators to identify and troubleshoot system problems easily. The sound capability is also ideal for presentation facilities, or studio applications. The Virtual Media function allows USB storage devices to be shared among all the servers – allowing operators to perform file transfers or install applications and OS patches from a single console – reducing down-time and saving maintenance costs.

Servers can be power controlled remotely when the Matrix KVM Switch is used in conjunction with ALTUSEN's PN0108 Power Over the NET™ power management device. Its Power Association function enables the switch's KVM ports to be associated with a PN0108's power outlets – allowing power management of the server attached to the port from the switch's interface. If a server has a dual power supply, secondary power association support lets you associate a second outlet port and synchronize the operation for both power supplies.

The Matrix KVM switch is designed with dual power supplies, to minimize downtime and offer 24/7 reliability to ensure the highest level of availability for your server room or data date center. With high availability, high reliability, high integration, and high security, an ATEN Matrix KVM Switch is the best solution for large server rooms and data centers.

KM0532
5-Console 32-Port
Matrix KVM Switch

KM0932
9-Console 32-Port
Matrix KVM Switch

KM0032
32-Port Matrix Expansion
KVM Switch

FEATURES

Hardware

- 9 (KM0932) or 5 (KM0532) consoles independently and simultaneously control up to 32 directly connected servers
- Flexible expansion – the installation can grow as your needs grow:
  - Up to 7 Matrix Expansion KVM switches can be daisy chained from a master switch
  - Switches can be cascaded to three levels to access and manage more than 8,000 computers (supports KH1508 / KH1516 switches for economical expansion)
  - Dual root configuration allows up to 18 consoles to access any servers on the installation
- Audio support for multimedia-capable devices
- Redundant power supply for 24 x7 reliability
- Multiplatform support: PC, Mac, Sun, and Serial Console access – any type of console can control any type of computer; mixed combinations (PS/2 & USB) supported on both the console and computer sides
- Compact design – rack mounts in only 1U of rack space

Ease-to-Use Interface

- Full screen graphical user interface – saves on training time and costs – increases user efficiency
- Embedded web interface for easy system configuration and management
- Composite tree view – all connected devices are integrated in a single device tree for convenient management access and control
- The port list automatically expands when stations are added – port names are automatically reconfigured when the station sequence changes
- Multilingual user interface support – English, German, Japanese, Korean, Traditional Chinese, Simplified Chinese, Russian.

Convenient Port Operation

- Computer selection via GUI or intuitive hotkey combinations
- Port level access control – users can only access the ports they have been authorized for – whether in a single-station or multi-stage installation
- Users can access features on multiple computers simultaneously – a user can be working and listening to music on computer 1 while utilizing virtual media on computer 2 at the same time.
- Versatile port operation modes for flexible server management:
  - Scan – provides automatic monitoring of user-selected computers
  - Exclusive – allows the first user to access a port to gain ex clusive viewing rights and control over it for as long as he accesses it
  - Occupy – allows the first user to access a port to control that port while others can only view it
  - Share – allows multiple users to access and control a port at the same time on a cooperative basis
- Broadcast support enables executing the same command on multiple servers at the same time

Management

- Supports up to 1024 user and 255 group accounts
- Three level password security: Super Administrator, Administrator, User
- Stringent password policy features that include password expiration; required password changes, account disabling, and account expiration.
- Intelligent Path Assignment – a master station can allocate the best available path for the user under multi-path cascading and daisy-chaining
- Power Over the NET™ integration for power control
- Power Association enables the switch's KVM ports to be associated with a PN0108's power outlets for remote power management of the servers from the switch's interface
- RS-232 port login support permits an administrator to control the KVM port access for all consoles connected to switch – any console can be assigned to access any KVM port from a single interface point
- Session Management – a Kill Session function provides administrators with the ability to force user logouts
- Backup and restore of configuration settings and user account information
- Firmware upgrades can be performed simultaneously on all daisy chained and cascaded slave switches as well as connected adapter cables
- Adapter ID – adapter cable's configuration information is stored with the adapter – no need to reconfigure the adapter when moving a server to a new port
- Event Log support

Virtual Media

- Virtual Media support lets you map storage media to servers that are connected to the switch allowing operators to conduct file transfers, install applications and OS patches, and perform diagnostics from a single console
- Works with USB enabled servers at the operating system and BIOS levels
- Supports DVD/CD drives, USB mass storage devices

Video

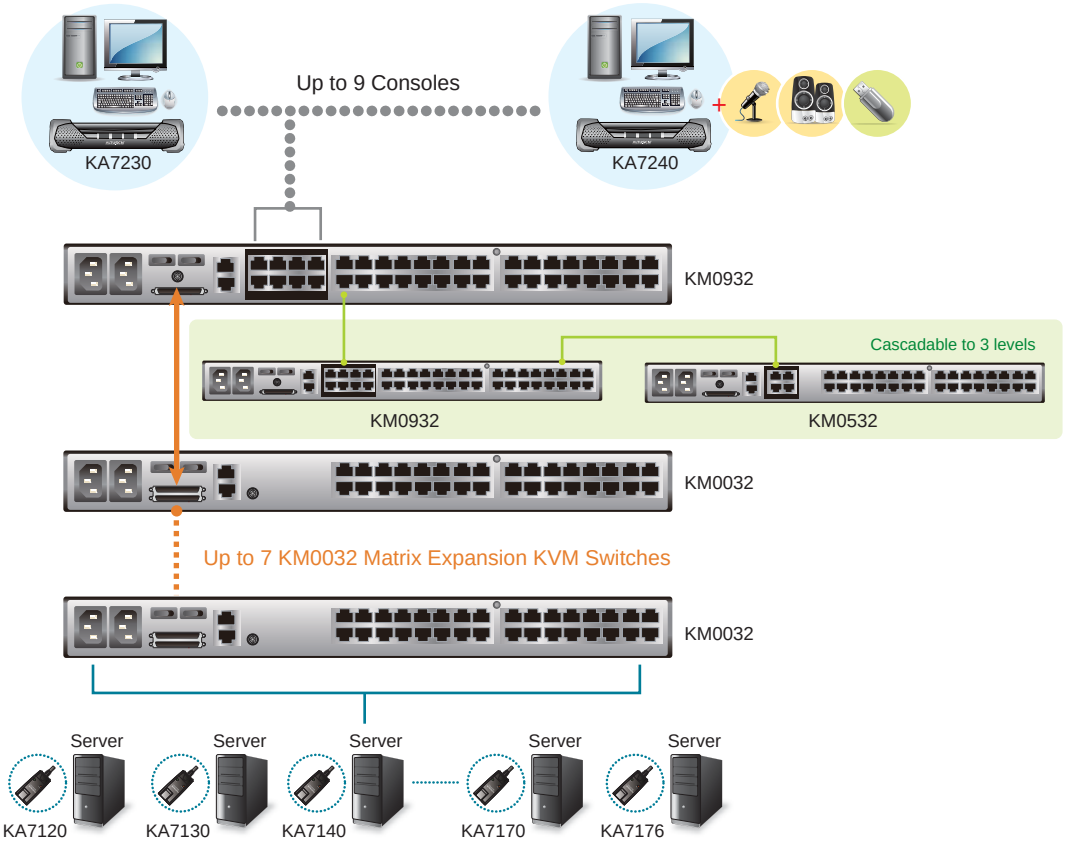
- User's display automatically adjusts to resolution differences on the remote servers
- Superior video quality – 1280 x 1024 @ 60 Hz for up to 300m
- Auto Signal Compensation (ASC) assures optimum video resolution for distances up to 300m between computers and consoles – no DIP switch setting required
- Enhanced video quality via automatic skew compensation support for the KA7240 console module, and the newer KVM adapter cable series (KA7120, KA7170, KA7130, KA7176)

Benefits

Cost Effective	Matrix KVM Switches allow 5 or 9 consoles to manage up to 32 target devices, while only taking up 1U of rack space. They also simplify cabling requirements and reduce cost by using Cat 5e/6 cable to connect console modules and KVM Adapter Cables. This not only permits extending the distance between console and servers up to 300 meters with 1280x1024@60Hz, but also offers an independent configuration for secure access, which is especially ideal for the security concerns associated with large server rooms and data centers.
Graphical User Interface	The Matrix KVM Switch offers an intuitive, full screen Graphical UI for both Console and Browser-based sessions. The composite integrated tree view of all ports offers convenient navigation and access.
Dual Power Supply	Dual Power supply operation provides backup redundancy and reliability – ensuring that down-time is kept at a minimum. Should one of the power supplies become unavailable, the other will take over in order to keep the system functioning normally.
Power Association	Used in conjunction with ALTUSEN's PN0108 Power Over the NET™ power management device, you can associate a Matrix KVM Switch's port with a PN0108's power outlet, and then manage the power operation of a server from the switch's interface – a single interface point. It also enables you to associate a second outlet port if the server has a dual power supply, and lets you synchronize the operation for both power supplies. In this way, Power Association reduces maintenance time and increases management efficiency
Flexible Scalability	Matrix KVM Switches can be daisy chained, cascaded, or both in tandem – flexible expansion configurations allows up to 9 consoles to control thousands of servers. Add consoles and servers a step at a time to match your company's growth. Daisy chaining KM0032 switches offers a further cost-saving configuration, since the use of dedicated chain ports allow all of the switch's KVM ports to be utilized for server connections – none of them need to be used for cascading. Your prior KH switch investment is protected, since those switches can also be cascaded.

Dual Root Configuration for Console Expansion	The advanced Dual Root function allows you to link two KM0932 switches to achieve an 18 console configuration – letting you to expand the number of consoles flexibly to fit your requirements. It's an ideal solution for applications that utilize multiple video displays, such as large data centers.
Non-blocked Access	All consoles connected to a master switch have simultaneous access to any server on the same level, as well as having independent access to any server on the installation.
Superior Video Quality	Matrix KVM Switches provide high video quality – 1280x1024 @60Hz up to 300 meters. The video signals are transmitted via Cat 5e/6 cable and maintain real-time and true video quality. Auto Signal Compensation (ASC), assures optimum video resolution over greater distances. In addition, an automatic skew compensation function corrects color phase and timing errors that occur over long distance transmissions – making a Matrix KVM Switch an excellent choice for video intensive applications.
Port Access Control via RS-232 Port	Each of the Console Modules has a built-in RS-232 port. Administrators can establish a serial terminal login to the Console Module in order to control the KVM port access for all consoles connected to switch – any console can be assigned to access any KVM port from a single interface point. This function is extremely useful in large data centers where the display of all the consoles can be projected onto a wall for easy viewing of all operations, and the entire installation can be monitored on a port-by-port basis.
Audio enabled	The Matrix KVM Switch supports audio functions for multimedia - capable devices connected with audio-capable adapter cables. Sound output and beeps from the servers can be heard on the console's speaker – allowing administrators to identify and troubleshoot system problems at an early stage, minimizing repair costs.
Adapter ID	The Adapter ID Function stores port information such as the Adapter ID, OS, keyboard language, adapter name, operation modes, etc. It enables administrators to relocate servers to different ports without having to reconfigure the adapters or change the user authorization settings of the KVM switch.

Diagram



Console Modules & KVM Adapter Cables

The Matrix KVM Switch's modular design – using console modules to link the console devices (keyboards, monitors, and mice) to the switch, and KVM Adapter Cables to link the switch to the servers – allows for a high degree of platform and interface integration. You can have PS/2 and USB interfaces; Win, Linux, Mac, and Sun platforms; all working together smoothly on the same installation. The use of RJ-45 connectors and Cat 5e/6 cabling eliminates bulky traditional cables, and makes for more reliable throughput and a neat, efficient, uncluttered work environment.

Console Modules

KA7230

PS/2-USB Console Module

- PS/2 and USB interface
- RS-232 Port
- Dual RJ-45 Ports
- External PC Port

KA7240

Virtual Media PS/2-USB Console Module

- PS/2 and USB interface
- RS-232 Port
- Dual RJ-45 Ports
- External PC Port
- Virtual Media Port
- Audio Ports
- Automatic Skew Compensation

KVM Adapter Cables

The following KVM Adapter cables are required for use with the Matrix KVM Switches:

	PS/2 KVM Adapter Cable	Sun Legacy KVM Adapter Cable	USB KVM Adapter Cable	Serial KVM Adapter Cable	USB Virtual Media KVM Adapter Cable with Audio
	KA7120	KA7130	KA7170	KA7140	KA7176
Type:	PS/2	Sun Legacy	For all USB systems	Serial	Connect to systems with USB 2.0 ports+Audio
Interface:	6-pin Mini-DIN Male 6-pin Mini-DIN Male HDB-15 Male	13W3 Male DIN 8 pin Male	USB Type A Male HDB-15 Male	RS-232 DB-9 Female	USB Type A Male HDB-15 Male 2 Audio plugs

*Matrix KVM Switches are also compatible with KA9120, KA9130, KA9140, KA9170. However, for optimum video quality, please use th e newer KVM adapter cable series with superior RGB Deskew functionality, as listed in the above table.

Specifications

Function		KM0532	KM0932	KM0032
Computer Connections	Direct	32		
	Max	8,000		
Console Connections		5	9	0
Port Selection		GUI, Hotkeys		via daisy chain
Connectors	Console Port	5 x RJ-45 Female	9 x RJ-45 Female	N/A
	KVM Port	32 x RJ-45 Female		
	Daisy chain	1 x VHDCI 68 Female (Black)		2 x VHDCI 68 Female (Black)
	LAN	1 x RJ-45 Female		N/A
	PON	1 x RJ-45 Female		
	F/W Upgrade	N/A		1 x RJ-45 Female (Black)
	Power	2 x 3-prong AC Socket		
Switches	Reset	1 x Semi-recessed Pushbutton		
	Power	2 x Rocker		
	F/W Upgrade	1 x Slide		
LEDs	Console Port (On Line)	5 (Green)	9 (Green)	N/A
	KVM Port (On Line / Selected)	32 Dual-colored (Green / Red)		
	Station ID	N/A		2 x 7-segment (Orange)
	Power	1 (Blue)		
I/P Rating		100–240V AC, 50/60 Hz; 1A		
Power Consumption		120V/45W; 240V/46W	120V/50W; 240V/51W	120V/50W; 240V/51W
Emulation	Keyboard/Mouse	PS/2; USB		
Scan Interval		1–240 Seconds		
Video		1280x1024@60Hz max. 300m;		
Environment	Operating Temperature	0–50˚C		
	Storage Temperature	-20–60˚C		
	Humidity	0–80% RH, Noncondensing		
Physical Properties	Housing	Metal		
	Weight	6.07 kg	6.08 kg	6.06 kg
	Dimensions (L x W x H)	43.36 x 41.09 x 4.40 cm		

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ATEN Simply Better Connections

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